

MEMORANDUM

DATE: February 28, 2023
TO: Board of Directors
FROM: Chris Hildred, Power Supply Director
RE: Staff Recommendation on PURPA 111(d) Standards

On November 6, 2021, Section 111(d) of the Public Utilities Regulatory Policies Act (“PURPA”) was amended by the Infrastructure Investment and Jobs Act of 2021 (“IIJA”) by adding two new standards to 16 U.S.C. § 2621(d). The new standards include promotion of demand response and flexibility practices and greater electrification of the transportation sector.

CORE Electric Cooperative (“CORE”), as a non-regulated electric utility as defined under PURPA, is required to consider the two new standards and determine if it is appropriate to implement each standard.

The text of each standard and CORE Staff’s recommendation for each are below.

Standard 1

16 U.S.C. § 2621(d)(20) DEMAND-RESPONSE PRACTICES

(A) In general

Each electric utility shall promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.

(B) Rate Recovery

(i) In general

Each State regulatory authority shall consider establishing rate mechanisms allowing an electric utility with respect to which the State regulatory authority has ratemaking authority to timely recover the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A)

(ii) Nonregulated electric utilities

A nonregulated electric utility may establish rate mechanisms for the timely recovery of the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A).

CORE currently offers rate options that incentivize energy use during off-peak periods, including an interruptible rate and time-of-use energy rates for all customer classes. However, as CORE transitions away from a full-requirements agreement to self-supply with a significant share of energy sourced from variable renewable resources, demand response and flexibility will increase in value. Being able to dispatch load up during periods when excess energy from renewables is available will reduce costs for curtailed energy, and being able to interrupt or delay consumption during periods with high net demand may reduce exposure to market prices and delay incremental expenses for generation and transmission expansion.

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Staff recommends that CORE adopt the standard but that implementation of any individual measure or program be subject to a cost-benefit analysis prior to deployment. Rate recovery should be addressed on a case-by-case basis subject to CORE's existing financial planning and rate development processes.

Standard 2

16 U.S.C. § 2621(d)(21) ELECTRIC VEHICLE CHARGING PROGRAMS

Each State shall consider measures to promote greater electrification of the transportation sector, including the establishment of rates that –

- (A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;
- (B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;
- (C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and
- (D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

Electric vehicles are a rapidly growing electricity end-use in CORE's service territory. Approximately 7,300 battery-only or plug-in hybrid electric vehicles have been registered within CORE's service territory through January 2023, up from about 2,300 at the end of 2019. While this level of adoption is low as a share of vehicles within the area, EVs are a rapidly growing market segment that may strain electrical infrastructure if charging occurs during peak demand hours for existing end uses. In order to manage costs while providing service to newly electrified loads, it is important to coordinate or control the time and rate of charging to avoid expensive infrastructure upgrades and the associated upward pressure on general retail rates.

CORE offers a variety of rate options that members may choose to best fit their preferred consumption, including charging electric vehicles in an economically efficient manner. The most commonly used residential rates include an on-peak demand charge, which incentivizes EV owners to charge their vehicles outside of CORE's 4-hour on-peak window each day. Similarly, the optional time-of-use rider for residential rates provides low-cost energy during the majority of hours each day outside of the on-peak period. At this time, CORE does not offer time-differentiated energy rates to new commercial accounts.

According to the U.S. Department of Energy, 80% of non-fleet light-duty EV charging is expected to occur at homes and is largely able to be delayed for several hours from a driver's initial return to their home. As such, controlled and lower-demand charging is sufficient for expected use patterns for the majority of residential EV owners. In the case of public and fleet charging, increased charging speeds may be necessary in some cases, but in others, longer dwell times at a location may allow for lower-cost and lower-demand charging options to be effective.

As such, Staff recommends that the Board adopt Part A of the EV charging standard but not parts B-D. While improving customer experience is an important enabler for EV adoption, CORE's fiduciary duty to existing members requires a careful balancing of investment and risk to provide an optimal experience without burdening non-participants in programs to encourage electrification of transportation. In many cases, reduced

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charging times may not provide an improved customer experience since those users may not be impacted by lower demand or delayed charging. Staff believes that adopting a standard only to recover marginal costs of electric delivery for EV charging or infrastructure may not be appropriate in all circumstances. An appropriate rate design for early-stage EV adoption may not scale to higher adoption levels without causing impacts on other customers, and any standard which could limit recovery to marginal costs may not be appropriate in all circumstances.